

CLAIMS

1. A method of correcting a predetermined adjustment value for an image forming apparatus producing an image of each of separated colors in accordance with said adjustment value, comprising the steps of:

forming a first base image from a base color output in accordance with a predetermined adjustment value, and forming a first correction image from a correction color to be a subject for correction output in accordance with a value obtained by changing a predetermined adjustment value within a predetermined range;

determining a first adjustment value from the changed adjustment values based on a density output from a sensor detecting the density of an image forming portion;

forming a second base image from the base color output in accordance with the predetermined adjustment value, and forming a second correction image from a correction color output in accordance with a plurality of adjustment values determined based on said first adjustment value;

determining a second adjustment value from said plurality of adjustment values based on the density output from said sensor; and

correcting the predetermined adjustment value for the correction color to the determined second adjustment value.

2. An image forming apparatus producing an image of each of separated colors in accordance with a predetermined adjustment value, comprising:

a sensor detecting a density of an image forming portion;

and

a processor capable of performing the following operations comprising:

a first forming step of forming a first base image from a base color output in accordance with a predetermined adjustment value, and forming a first correction image from a correction color to be a subject for correction output in accordance with a value obtained by changing a predetermined adjustment value within a predetermined range;

a step of determining a first adjustment value from the changed adjustment values based on the density output from said sensor;

a second forming step of forming a second base image from a base color output in accordance with the predetermined adjustment value, and forming a second correction image from a correction color output in accordance with a plurality of adjustment values determined based on said first adjustment value;

a step of determining a second adjustment value from said plurality of adjustment values based on the density output from said sensor; and

a correction step of correcting the predetermined

adjustment value for the correction color to the determined second adjustment value.

3. The image forming apparatus according to Claim 2, wherein said first forming step forms the first base images with a first interval and forms said first correction images based on a value obtained by changing an adjustment value within the range of the first interval.

4. The image forming apparatus according to Claim 2, wherein said first forming step forms said first base images and first correction images having a same shape.

5. The image forming apparatus according to Claim 3, wherein said second forming step forms the second base images, based on said first interval, from the base color output in accordance with the predetermined adjustment value, and forms the second correction images, based on said first interval, from the correction color output in accordance with the plurality of adjustment values determined based on the first adjustment value and the first interval.

6. The image forming apparatus according to Claim 5, wherein the processor is further capable of performing the step of defining the plurality of adjustment values determined

based on said first adjustment value and the first interval such that the adjustment values fall within a predetermined range.

7. The image forming apparatus according to Claim 5, wherein each of said second base images and said second correction images has a rectangular shape and a width corresponding to an integer multiple of said first interval.

8. The image forming apparatus according to Claim 2, said processor is further capable of performing the step of

determining whether or not image formation by said second forming step is to be executed,

wherein said correction step corrects the predetermined adjustment value for the correction color to said determined first adjustment value if it is determined that no image formation by said second forming step is to be executed.

9. The image forming apparatus according to Claim 2, wherein said step of determining the first adjustment value determines the first adjustment value based on an adjustment value at which the density output from said sensor for the first base image formed by said first forming step and for the first correction image formed in accordance with a changed adjustment value takes either a maximum value or a minimum value.

10. The image forming apparatus according to Claim 2, wherein said step of determining said second adjustment value determines the second adjustment value based on an adjustment value at which the density output from said sensor for the second base image formed by said second forming step and for the second correction image formed in accordance with the plurality of adjustment values takes either a maximum value or a minimum value.

11. The image forming apparatus according to Claim 9, wherein said first forming step forms a plurality of first base images and a plurality of first correction images having a same rectangular shape with an interval longer than twice a short side length of each of the first base images and the first correction images.

12. An image forming apparatus producing an image of each of separated colors in accordance with a predetermined adjustment value, comprising:

a sensor detecting a density of an image forming portion;

first forming means for forming a first base image from a base color output in accordance with a predetermined adjustment value, and forming a first correction image from a correction color to be a subject for correction output in accordance with a value obtained by changing a predetermined adjustment value within a predetermined range;

means for determining a first adjustment value from the changed adjustment values based on the density output from said sensor;

second forming means for forming a second base image from a base color output in accordance with a predetermined adjustment value, and forming a second correction image from a correction color output in accordance with a plurality of adjustment values determined based on said first adjustment value;

means for determining a second adjustment value from said plurality of adjustment values based on the density output from said sensor; and

correction means for correcting the predetermined adjustment value for the correction color to the determined second adjustment value.

13. The image forming apparatus according to Claim 12, wherein said first forming means forms the first base images with a first interval and forms said first correction images based on a value obtained by changing an adjustment value within the range of the first interval.

14. The image forming apparatus according to Claim 12, wherein said first forming means forms said first base images and first correction images having a same shape.

15. The image forming apparatus according to Claim 13, wherein said second forming means forms the second base images, based on said first interval, from the base color output in accordance with the predetermined adjustment value, and forms the second correction images, based on said first interval, from the correction color output in accordance with the plurality of adjustment values determined based on the first adjustment value and the first interval.

16. The image forming apparatus according to Claim 15, further comprising

means for defining the plurality of adjustment values determined based on said first adjustment value and the first interval such that the adjustment values fall within a predetermined range.

17. The image forming apparatus according to Claim 15, wherein each of said second base images and said second correction images has a rectangular shape and a width corresponding to an integer multiple of said first interval.

18. The image forming apparatus according to Claim 12, further comprising

means for determining whether or not image formation by said second forming means is to be executed,

wherein said correction means corrects the predetermined adjustment value for the correction color to said determined first adjustment value if it is determined that no image formation by said second forming means is to be executed.

19. The image forming apparatus according to Claim 15, wherein said means for determining the first adjustment value determines the first adjustment value based on an adjustment value at which the density output from said sensor for the first base image formed by said first forming means and for the first correction image formed in accordance with a changed adjustment value takes either a maximum value or a minimum value.

20. A recording medium recording a computer program for correcting a predetermined adjustment value for an image forming apparatus which produces an image of each of separated colors in accordance with said adjustment value, said computer program comprising the steps of:

making a computer form a first base image from a base color output in accordance with a predetermined adjustment value, and form a first correction image from a correction color to be a subject for correction output in accordance with a value obtained by changing a predetermined adjustment value within a predetermined range;

making a computer determine a first adjustment value

from the changed adjustment values based on a density output from a sensor detecting the density of an image forming portion;

making a computer form a second base image from a base color output in accordance with the predetermined adjustment value, and form a second correction image from a correction color output in accordance with a plurality of adjustment values determined based on said first adjustment value;

making a computer determine a second adjustment value from said plurality of adjustment values based on the density output from said sensor; and

making a computer correct the predetermined adjustment value for the correction color to the determined second adjustment value.